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BOARD FOOT VOLUME TABLES
FOR IMPORTANT TIMBER SPECIES
IN MICHIGAN AND WISCONSIN

Compiled by the

LAKE STATES FOREST EXPERIMENT STATION*

For use in the

FOREST SURVEY OF THE LAKE STATES

*Maintained by the U.S. Department of Agriculture in cooperation with the University of Minnesota at University Farm, St. Paul, Minnesota.

BOARD FOOT VOLUME TABLES FOR IMPORTANT TIMBER SPECIES IN MICHIGAN AND WISCONSIN

The accompanying volume tables show the average board-foot content, both by Scribner and International, 1/4" kerf log rules, for the following timber species in Michigan and Wisconsin:

Sugar Maple	Red and Silver Maples
Yellow Birch	Beech
Basswood	Red and White Oaks
Elms	Paper Birch
Hickories	Black Ash
Hemlock	

The data on which these tables are based were collected in connection with the Forest Survey of the Lake States from many localities and a wide range of forest conditions throughout Wisconsin and northern Michigan.

The merchantable height on which these tables are based is defined as the length in feet from stump to the point on the main stem of the tree where defect, deformity or large branches make the wood unsuitable for sawlogs, with the further limitation that no wood less than 8.0 inches in diameter inside bark, in the case of hardwoods, or 6.0 inches in the case of hemlock, is considered merchantable. Ordinarily, the merchantable limit of small trees is determined by the minimum top diameter and of larger trees by branches or defect.

The merchantable heights represent the average of merchantable trees only. No tree was considered merchantable which would not produce at least a 10-foot log of high quality or a 16-foot log of low quality. Trees 18 inches or larger at breast height were required to contain at least one high quality or two low quality 16-foot logs.*

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*The minimum merchantable sawlog is required to be at least 8 feet long - 50 percent sound and to produce at least 30 percent No. 1 common or better lumber and must be suitable for box-boards or rough lumber. Although this standard of merchantability determines the minimum quality of sawlog, merchantable height is not measured in terms of log-lengths but is taken to the nearest two feet without regard to the manner in which the stem might be bucked up.

These standards of utilization and merchantability conform very closely with the average best utilization of current logging operations in Michigan and Wisconsin.

The volume tables show the gross scale of trees and apply to timber stands over extensive areas. For close estimates of specific stands the applicability of any volume table should be checked by comparing the table values with the measured scale of trees from the area. The standards of merchantability above described necessarily must be used.

To obtain net volumes, the following average cull percentages may be used:

	Upper Michigan		Wisconsin	
	West Half	East Half	Northern	Southwestern
Sugar Maple	20	19	17	25
Yellow Birch	20	20	22	25
Basswood	25	21	27	30
Elms	15	21	20	25
Paper Birch	20	10	20	20
Soft Maples	30	25	25	25
Beech	30	20	30	-
Oaks	15	15	9	18
Black Ash	20	20	20	25
Hickory	-	-	15	20
Hemlock	25	21	25	-

The cull factors allow for long butts and other sections of merchantable trees commonly left in the woods (but not for cull sections lying above the merchantable height), as well as for loss in milling due to sweep rot, shake, etc. These cull percentages apply to the gross tree volumes presented in the volume tables. If logs or trees of better or poorer quality than are represented by the accompanying volume tables are included in volume estimates, a proportionate adjustment would be necessary in the cull factors.

SUGAR MAPLE
(Acer saccharum)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	19	37	50	60	70			68
12	33	56	76	89	105			159
14	48	82	110	132	152	172		181
16	65	110	148	185	215	238	257	181
18		142	195	249	290	320	343	154
20		185	255	322	375	415	440	119
22		234	320	400	470	520	555	89
24		295	403	495	580	650	700	63
26		350	490	608	710	795	860	21
28			577	710	833	938	1010	22
30			660	810	950	1065	1155	8
32			740	904	1060	1190	1292	5
34			812	990	1160	1304	1420	2
Basis	42	182	276	366	179	25	2	1072

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

SUGAR MAPLE
(Acer saccharum)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International ¼"

Merchantable Height, above stump - feet

Diameter Breast High	10	20	30	40	50	60	70	Basis
	Volume - board feet							
Inches								Trees
10	25	44	59	70	81			68
12	40	68	90	106	126			159
14	52	94	127	154	181	200		181
16	69	122	165	210	245	270	290	181
18	87	158	217	277	325	357	380	154
20		203	280	352	412	455	485	119
22		268	350	433	507	565	607	89
24		308	428	535	620	694	747	63
26		371	515	638	748	840	907	21
28		435	605	742	872	980	1062	22
30		496	695	850	995	1120	1217	8
32			780	953	1118	1255	1365	5
34			860	1050	1230	1379	1500	2
Basis	42	182	276	366	179	25	2	1072

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 3.0 inches.

Stump height 1 foot up to 13 inches D.B.H., 2 feet over 13 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

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RED MAPLE AND SILVER MAPLE
(Acer rubrum and Acer saccharinum)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	19	37	49	59				46
12	31	54	73	86	100	112		72
14	48	82	110	132	154	172		79
16	64	110	154	188	220	250		57
18	82	148	203	259	303	333	357	37
20	105	194	267	335	393	435	463	24
22	132	245	335	415	487	542	582	8
24		303	415	510	600	670	722	5
26		360	496	618	720	810	875	2
28		430	596	730	860	965	1045	
30			695	850	995	1120	1217	1
Basis	39	95	119	56	17	5		331

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, defect, deformity or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

RED MAPLE AND SILVER MAPLE
(Acer rubrum and Acer saccharinum)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International ¼"

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	26	47	63	75				46
12	37	63	85	100	115	130		72
14	51	88	118	142	166	186		79
16	68	120	161	204	240	260		57
18	87	158	217	277	325	357	380	37
20	114	208	287	360	422	467	497	24
22		268	369	455	535	595	640	8
24		335	460	572	673	754	815	5
26		408	570	700	822	925	1003	2
28		496	695	850	995	1120	1217	
30			830	1012	1183	1328	1445	1
Basis	39	95	119	56	17	5		331

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, defect, deformity or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

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YELLOW BIRCH
(Betula lutea)

Wisconsin- Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	19	37	49	59	68			51
12	31	54	73	86	98			81
14	47	80	108	129	151			93
16	65	111	150	188	217	242		78
18	79	142	195	249	290	320		71
20	100	185	255	322	375	415		47
22	125	230	317	395	465	515		34
24		278	390	480	565	632	680	28
26		332	462	578	670	750	813	17
28		390	545	670	785	880	954	6
30		450	630	770	906	1018	1103	5
32		515	720	878	1027	1143	1240	4
Basis	30	120	183	154	27	1		515

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

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YELLOW BIRCH
(Betula lutea)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump - feet: 10	20	30	40	50	60	70	Basis
	Volume - board feet							
Inches								Trees
10	24	42	58	68	78			51
12	40	65	90	106	126			81
14	53	93	125	157	184			93
16	70	124	170	216	252	278		78
18	89	163	221	281	328	364		71
20	110	203	280	352	413	452		47
22	135	247	343	425	498	555		34
24		295	411	504	593	659	708	28
26		342	480	595	698	780	845	17
28		398	555	685	803	905	980	6
30		455	640	780	918	1032	1120	5
32		513	718	875	1030	1157	1260	4
Basis	30	120	183	154	27	1		515

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

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PAPER BIRCH
(Betula alba var. papyrifera)

Wisconsin - Michigan

Volume In Board Feet

1936

Govorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet: 10	20	30	40	50	60	Basis
	Volume - board feet						
Inches							Trees
10	20	38	52	62			46
12	33	58	77	91	106		48
14	48	82	110	132	154	172	40
16	63	108	145	179	210	230	26
18	75	136	185	236	274	296	11
20	92	167	230	292	341	375	4
22		205	284	355	415	460	5
24		250	341	423	495	550	
Basis	35	61	51	23	10		180

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

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PAPER BIRCH
(Betula alba, var. papyrifera)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump - feet						Basis
	10	20	30	40	50	60	
	Volume - board feet						
Inches							Trees
10	24	42	58	68			46
12	38	64	86	102	118		48
14	53	90	121	145	168	188	40
16	68	118	159	201	232	255	26
18	81	146	201	256	300	330	11
20	100	182	252	318	372	410	4
22		223	307	385	450	500	5
24		265	365	450	528	590	
Basis	35	61	51	23	10		180

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

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ELM

(Ulmus americana)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	18	36	48	57				38
12	33	57	77	91	107			101
14	50	85	114	137	161	179		99
16	67	116	156	194	230	253		70
18		150	206	263	305	338	362	65
20		195	267	337	393	435	463	37
22		245	335	415	488	543	582	23
24		297	412	507	597	670	723	19
26		355	494	610	715	800	865	19
28		420	586	720	845	950	1030	7
30		490	685	838	980	1105	1200	5
32		563	785	960	1124	1260	1372	5
34				1090	1270	1430	1555	1
Basis	49	129	126	118	49	17	1	489

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

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Block indicates extent of original data.

AMERICAN & SLIPPERY ELM
(Ulmus americana & Ulmus fulva)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump - feet: 10	20	30	40	50	60	70	Basis
	Volume - board feet							
Inches								Trees
10	20	38	52	62				38
12	37	63	85	100	115			101
14	52	94	127	154	181	200		99
16	70	124	170	216	252	278		70
18	90	163	224	284	334	368	393	65
20	114	208	287	360	422	467	497	37
22		260	358	443	518	579	620	23
24		310	430	535	625	700	755	19
26		371	515	638	748	840	907	19
28		435	610	745	875	988	1068	7
30		502	703	858	1010	1133	1233	5
32		578	802	980	1149	1288	1403	5
34				1105	1295	1445	1565	1
36				1240	1435	1610	1760	
Basis	49	129	126	118	49	17	1	489

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

BASSWOOD
(Tilla glabra)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	19	37	49	59				56
12	31	54	73	86	100	112		101
14	48	82	110	132	154	172	186	100
16	65	110	148	185	215	238	257	72
18	83	140	192	245	287	315	338	46
20		177	244	310	362	400	425	31
22		223	307	383	450	498	534	22
24		275	375	462	545	605	653	15
26		326	446	554	650	728	782	10
28			525	648	760	853	920	6
30			610	748	880	990	1070	2
32				860	1010	1135	1232	2
34				980	1147	1285	1400	1
36					1295	1453	1582	1
Basis	49	102	121	92	50	43	8	465

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

BASSWOOD
(Tilia glabra)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	21	40	55	65				56
12	37	63	85	100	115	130		101
14	54	91	123	148	172	193	208	100
16	68	120	161	204	240	260	280	72
18	85	155	210	268	313	344	368	46
20		193	265	337	395	435	464	31
22		244	330	417	488	545	580	22
24		296	406	500	587	657	708	15
26		342	480	595	698	780	845	10
28			570	700	822	925	1003	6
30			659	804	945	1063	1153	2
32				920	1082	1215	1323	2
34				1039	1215	1360	1483	1
Basis	49	102	121	92	90	42	8	464

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

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BLACK ASH
(Fraxinus nigra)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet						Basis
	10	20	30	40	50	60	
	Volume - board feet						
Inches							Trees
10	20	36	48	57	65		30
12	30	52	73	86	100		51
14	46	79	106	126	148		36
16	65	110	148	185	216	238	9
18		146	201	256	299	330	4
20		195	265	335	394	435	3
22		250	343	425	500	555	1
24			430	530	620	695	1
26			530	650	760	855	
Basis	11	51	52	18	2	1	135

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 5.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

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BLACK ASH
(Fraxinus nigra)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump - feet						Basis
	10	20	30	40	50	60	
	Volume - board feet						
Inches							Trees
10	25	45	60	71	82		30
12	38	64	86	102	118		51
14	54	91	123	148	172		36
16	69	122	165	210	245	270	9
18		161	221	281	328	364	4
20		210	288	365	425	472	3
22		268	369	455	535	595	1
24			447	560	648	728	1
26			540	670			
Basis	11	51	52	18	2	1	135

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

BEECH
(Fagus grandifolia)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet: 10	20	30	40	50	60	70	Basis
	Volume - board feet							
Inches								Trees
10	24	43	59	69	82			42
12	39	68	90	115	130	140		76
14	59	99	133	166	194	214		107
16	78	130	181	229	267	294	315	72
18		171	235	300	350	385	412	55
20		220	305	380	445	490	527	29
22		275	375	462	545	605	653	14
24		330	453	570	660	740	800	7
26		390	545	670	785	885	955	2
28			640	785	920	1035	1120	1
Basis	14	69	114	158	45	4	1	405

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 6.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

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Block indicates extent of original data.

BEECH
(Fagus grandifolia)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	29	51	71	80	93			42
12	46	78	105	125	146	164		76
14	65	111	150	188	218	242		107
16	81	146	201	256	300	330	393	72
18		189	260	330	385	423	452	55
20		242	332	412	485	535	575	29
22		300	411	504	593	659	708	14
24		355	493	612	715	802	868	7
26		422	587	721	847	950	1030	2
28			690	843	988	1110	1208	1
Basis	14	69	114	158	45	4	1	405

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

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Block indicates extent of original data.

HICKORIES
(Hicoria, sp.)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet					Basis
	10	20	30	40	50	
	Volume - board feet					
Inches						Trees
10	21	40	55	65		18
12	36	62	83	98	114	32
14	51	88	118	142	168	15
16		118	159	196	230	3
18			201	256	300	
Basis	11	28	24	5		68

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

HICKORIES
(Hicoria, sp.)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump - feet					Basis
	10	20	30	40	50	
	Volume - board feet					
Inches						Trees
10	26	47	63	75		18
12	43	73	98	116	134	32
14	60	102	136	166	194	15
16		129	178	226	263	3
18			227	288	338	
Basis	11	28	24	5		68

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

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RED OAK AND WHITE OAK
(Quercus borealis and Quercus alba)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet: 10	20	30	40	50	60	70	Basis
	Volume - board feet							
Inches								Trees
10	20	37	50	60				119
12	30	52	70	82	95			208
14	43	74	100	118	139			171
16	57	101	138	170	205			116
18	75	137	187	239	276	303		45
20	96	175	243	308	360	390	420	26
22		224	308	385	445	490	533	11
24		275	375	468	550	615	660	4
26		330	455	570	660	740	800	3
28		390	545	670	785	880	955	1
30		460	640	782	920	1030	1120	2
32		525	735	900	1050	1185	1285	
34			840	1025	1200	1345	1465	1
Basis	122	295	206	77	5	2		707

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

RED OAK AND WHITE OAK
(Quercus borealis and Quercus alba)

Wisconsin - Michigan

Volume In Board Feet

1936

Geyorkiantz — International $\frac{1}{4}$"

Diameter Breast High	Merchantable Height, above stump feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	24	42	58	68				119
12	35	61	81	96	114			208
14	51	87	116	140	162			171
16	67	116	156	197	227			116
18	83	150	206	263	308	346		45
20	105	193	265	337	395	435	464	26
22		244	330	417	488	545	580	11
24		296	406	500	587	657	708	4
26		350	484	602	701	789	850	3
28		415	578	710	835	935	1012	1
30		483	675	825	968	1088	1170	2
32		545	760	930	1088	1222	1330	
34			860	1050	1230	1380	1500	1
Basis	122	295	206	77	5	2		707

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 8.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

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Block indicates extent of original data.

HEMLOCK
(Tsuga canadensis)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — Scribner

Diameter Breast High	Merchantable Height, above stump - feet							Basis
	10	20	30	40	50	60	70	
	Volume - board feet							
Inches								Trees
10	15	30	41	49	57			67
12	28	49	66	79	90	101		97
14	43	75	98	116	136	152	165	117
16	60	103	138	169	198	219	235	107
18	74	132	181	229	267	295	315	76
20	93	170	232	296	345	380	405	69
22	115	215	293	367	428	472	505	44
24	143	265	360	445	523	583	625	29
26	173	310	430	540	625	700	754	29
28		370	511	633	741	830	898	12
30		432	600	738	865	972	1054	8
32			695	850	995	1120	1216	1
34				965	1132	1270	1380	1
36				1090	1273	1428	1555	1
Basis	6	120	175	134	130	75	18	658

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 6.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

Block indicates extent of original data.

HEMLOCK
(Tsuga canadensis)

Wisconsin - Michigan

Volume In Board Feet

1936

Gevorkiantz — International ¼"

Diameter Breast High	Merchantable Height, above stump - feet: 10	20	30	40	50	60	70	Basis
	Volume - board feet							
Inches								Trees
10	21	40	55	65	76			67
12	35	61	81	96	112	125		97
14	50	85	114	137	159	179	193	117
16	66	112	152	191	222	245	265	107
18	79	142	195	249	290	320	343	76
20		182	250	318	370	410	436	69
22		229	315	390	460	510	550	44
24		283	392	480	565	632	680	29
26		340	470	588	685	768	830	29
28		405	563	693	801	910	989	12
30			660	808	948	1065	1155	8
32				930	1090	1221	1330	1
34				1060	1238	1389	1510	1
36				1190	1389	1550	1693	1
Basis	6	120	145	134	130	75	17	658

Volume above stump to usable top, i.e., the point on the stem at which merchantability for sawtimber is limited by branches, deformity, defect or by a diameter of less than 6.0 inches.

Stump height 1 foot up to 18 inches D.B.H., 2 feet over 18 inches D.B.H.

Compiled by the Lake States Forest Experiment Station from data collected on the Forest Survey of the Lake States. The table gives average values based on measurement of trees throughout Wisconsin and northern Michigan.

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